



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/004,786	12/07/2001	Jan Lindskog	000500-277	7881
27045	7590	12/26/2007		
ERICSSON INC. 6300 LEGACY DRIVE M/S EVR 1-C-11 PLANO, TX 75024			EXAMINER SAMS, MATTHEW C	
			ART UNIT 2617	PAPER NUMBER
			MAIL DATE 12/26/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/004,786	<b>Applicant(s)</b> LINDSKOG ET AL.	
	<b>Examiner</b> Matthew C. Sams	<b>Art Unit</b> 2617	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 August 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3,5,7,8,10-16 and 18-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,5,7,8,10-16 and 18-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This office action is in response to the examiner being reversed by the BPAI on 8/30/2007. In view of Stewart et al. (US-6,732,176), prosecution is hereby reopened.

#### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1, 3, 5, 7, 10-12, 16, 19, 21, 23 and 24 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 states "upon which request the NIC requests the AP to be entered into WLAN sleep state" which seems to mean the AP is being entered into a sleep state, however the following line states "the mobile terminal enters WLAN sleep state". It is not clear how the AP knows to send the mobile terminal an acknowledgement to enter the WLAN sleep state because the NIC has requested the AP to be entered into WLAN sleep state, not the mobile terminal.

Claims 7, 11 and 16 are rejected as incorporating the second paragraph issue of claim 1.

Claim 3 states "upon which request the NIC requests a second mobile terminal in the ad hoc network to be entered into WLAN sleep state", which seems to mean the second mobile terminal is being entered into a sleep state, however the following line states "the mobile terminal enters WLAN sleep state". It is not clear how the second

mobile terminal knows to send the mobile terminal an acknowledgement to enter the WLAN sleep state because the NIC has requested the second mobile terminal to be entered into WLAN sleep state, not the mobile terminal.

Claims 10, 12 and 23 are rejected as incorporating the second paragraph issue of claim 3.

Claim 5 states "upon which request the mobile terminal requests the AP to be disassociated or de-authenticated from the AP", which seems to mean the AP is being disassociated or de-authenticated from the AP, however the following lines state "the mobile terminal enters a disassociated or de-authenticated state. It is not clear how the AP knows to send the mobile terminal an acknowledgement to the mobile terminal because the mobile terminal has requested the AP to be disassociated or de-authenticated from the AP.

Claims 19, 21 and 24 are rejected as incorporating the second paragraph issue of claim 5.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 3, 7, 10, 11, 13-16, 18 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beach (US-6,067,297) in view of Larsson et al. (US-6,463,307 hereinafter, Larsson) and Stewart et al. (US-6,732,176 hereinafter, Stewart).

Regarding claim 1, Beach teaches a method for power saving in a mobile terminal used in a wireless local area network (WLAN) (Col. 1 line 65 through Col. 2 line 18) that comprises a wireless network interface card compatible with IEEE 802.11 power save procedures (Col. 1 lines 32-41 & line 65 through Col. 2 line 16), an access point (Col. 2 line 17) and an operating system compatible with a plurality of the power states. (Col. 2 lines 59-64 and Col. 6 lines 54-59) Beach differs from the claimed invention by not explicitly reciting a mobile terminal that requests for a transition from an active state to a less active state, upon which the NIC requests the access point to be entered into a WLAN sleep state and then enters the sleep state after acknowledgement from the access point.

In an analogous art, Larsson teaches a method and apparatus for power saving in a mobile terminal where the mobile terminal can request to enter or exit the power saving mode and then informs the access point. (Col. 3 lines 20-60) At the time the invention was made, it would have been obvious to one of ordinary skill in the art to implement the method of power saving in a mobile terminal of Beach after modifying it to incorporate the ability for a mobile terminal to enter and exit the power saving mode of Larsson by specifically enabling the mobile to request such transitions. One of ordinary skill in the art would have been motivated to do this since allowing the mobile terminal to request to enter or exit a power saving mode conserves battery power for

when the user needs the mobile terminal and lets the access point know to queue messages for the mobile terminal. (Col. 2 lines 33-64)

Beach in view of Larsson teaches a method and apparatus for power saving in a mobile terminal and Beach suggests the use of an 802.11 radio card (Col. 3 lines 8-11), however fails to explicitly recite the mobile terminal requests a NIC to communicate with the access point.

In an analogous art, Stewart teaches a communication network (Figs. 1 & 6) that includes portable computing devices (Fig. 6 [110]) comprising a NIC (Col. 2 lines 20-23 & Col. 5 line 65 through Col. 6 line 1) that is used for communicating with an access point (Fig. 6 [120]) over the IEEE 802.11 wireless network standard. (Col. 5 lines 8-11) At the time the invention was made, it would have been obvious to one of ordinary skill in the art to implement the method of power saving in mobile terminals of Beach in view of Larsson after modifying the mobile terminal to incorporate a NIC specifically for communicating with an access point using IEEE 802.11 as taught by, Stewart and thereby in response to communication requests by the mobile terminal intended for the 802.11 network, specifically having the NIC communicate with or request the AP. One of ordinary skill in the art would have been motivated to do this since a NIC provides a convenient and readily available means to enable mobile devices to communicate with wireless local area networks.

Regarding claim 3, Beach teaches a method for power saving in a mobile terminal used in a wireless local area network (WLAN) in an ad hoc network (Col. 2 lines 35-37 and Col. 7 lines 4-7) that comprises a wireless network interface card compatible with IEEE 802.11 power save procedures (Col. 1 lines 32-41 & line 65

through Col. 2 line 16) and an operating system compatible with a plurality of the power states. (Col. 2 lines 7-16, Col. 6 lines 54-59 and Col. 7 lines 4-7). Beach further teaches communication with a second mobile terminal (serving as the access point – col. 5, lines 38-40), however differs from the claimed invention by not explicitly reciting a mobile terminal that request for a transition from an active state to a less active state, upon which the NIC requests the second mobile terminal to be entered into a WLAN sleep state and then enters the sleep state after acknowledgement from the second mobile terminal.

In an analogous art, Larsson teaches a method and apparatus for power saving in a mobile terminal where the mobile terminal can request to enter or exit the power saving mode and then informs the access point. (Col. 3 lines 20-60 *i.e.* the access point would be the master in an ad hoc network - ) At the time the invention was made, it would have been obvious to one of ordinary skill in the art to implement the method of power saving in a mobile terminal in an ad hoc network of Beach after modifying it to incorporate the ability for a mobile terminal to enter and exit the power saving mode of Larsson by specifically enabling the mobile to request such transitions. One of ordinary skill in the art would have been motivated to do this since allowing the mobile terminal to request to enter or exit a power saving mode conserves battery power for when the user needs the mobile terminal and lets the access point know to queue messages for the mobile terminal. (Col. 2 lines 33-64)

Beach in view of Larsson teaches a method and apparatus for power saving in a mobile terminal and Beach suggests the use of an 802.11 radio card (Col. 3 lines 8-11),

however fails to explicitly recite the mobile terminal requests a NIC to communicate with the second mobile terminal.

In an analogous art, Stewart teaches a communication network (Figs. 1 & 6) that includes portable computing devices (Fig. 6 [110]) comprising a NIC (Col. 2 lines 20-23 & Col. 5 line 65 through Col. 6 line 1) that is used for communicating with a second mobile terminal in an ad hoc network (Col. 12 lines 6-10) over the IEEE 802.11 wireless network standard. (Col. 5 lines 8-11) At the time the invention was made, it would have been obvious to one of ordinary skill in the art to implement the method of power saving in mobile terminals of Beach in view of Larsson after modifying the mobile terminal to incorporate a NIC specifically for communicating in an ad hoc network using IEEE 802.11 as taught by, Stewart and thereby in response to communication requests by the mobile terminal intended for the 802.11 network, specifically having the NIC communicate with or request the second mobile terminal. One of ordinary skill in the art would have been motivated to do this since a NIC provides a convenient and readily available means to enable mobile devices to communicate with wireless local area networks.

Regarding claim 7, Beach in view of Larsson and Stewart teaches an access point that disassociates mobile terminals without using a disassociation signal. (Beach Col. 3 lines 22-28)

Regarding claim 10, Beach in view of Larsson and Stewart teaches a second terminal that disassociates from mobile terminals without using a disassociation signal. (Beach Col. 3 lines 22-28)



Regarding claim 11, Beach in view of Larsson and Stewart teaches a mobile terminal that associates with the access point on transition from a power saving state to an active state. (Larsson Col. 5 line 52 through Col. 6 line 9)

Regarding claim 13, Beach teaches a method for power control in a mobile terminal used in a wireless local area network (WLAN) (Col. 1 line 65 through Col. 2 line 18) that comprises a wireless network interface card compatible with IEEE 802.11 power save procedures (Col. 1 lines 32-41 & line 65 through Col. 2 line 16), an access point (Col. 2 line 17) and an operating system compatible with a plurality of the power states. (Col. 2 lines 59-64 and Col. 6 lines 54-59) Beach differs from the claimed invention by not explicitly reciting a mobile terminal that initializes at a point of time later than a time-out interval due to inactivity in order to lower the system state.

In an analogous art, Larsson teaches a mobile terminal that initializes at a point in time later than a time-out interval due to inactivity in order to conserve power. (Col. 1 line 66 through Col. 2 line 5 and Col. 2 lines 10-23) At the time the invention was made, it would have been obvious to one of ordinary skill in the art to implement the method of power control for a mobile terminal of Beach after modifying it to incorporate the ability of a mobile terminal to initialize at a point in time later than a time-out interval as taught by Larsson. One of ordinary skill in the art would have been motivated to do this since an inactive mobile terminal conserves more battery power when in a power saving mode for a longer period of time. (Col. 2 lines 33-59)

Beach in view of Larsson teaches a method and apparatus for power saving in a mobile terminal and Beach suggests the use of an 802.11 radio card (Col. 3 lines 8-11),

however fails to explicitly recite the mobile terminal requests a NIC to communicate with the access point.

In an analogous art, Stewart teaches a communication network (Figs. 1 & 6) that includes portable computing devices (Fig. 6 [110]) comprising a NIC (Col. 2 lines 20-23 & Col. 5 line 65 through Col. 6 line 1) that is used for communicating with an access point (Fig. 6 [120]) over the IEEE 802.11 wireless network standard. (Col. 5 lines 8-11) At the time the invention was made, it would have been obvious to one of ordinary skill in the art to implement the method of power saving in mobile terminals of Beach in view of Larsson after modifying the mobile terminal to incorporate a NIC specifically for communicating with an access point using IEEE 802.11 as taught by, Stewart and thereby in response to communication requests by the mobile terminal intended for the 802.11 network, specifically having the NIC communicate with or request the AP. One of ordinary skill in the art would have been motivated to do this since a NIC provides a convenient and readily available means to enable mobile devices to communicate with wireless local area networks.

Regarding claim 14, Beach in view of Larsson and Stewart teaches a method for power saving in which the mobile terminal goes from a power saving mode to an active mode when data is pending for transmission. (Beach Col. 10 lines 28-35 and Col. 11 line 33 through Col. 12 line 7)

Regarding claim 15, Beach in view of Larsson and Stewart teaches a timer in the mobile terminal used to initiate the mobile terminal to enter a power saving state. (Larsson Fig. 4 [406])

Regarding claim 16, Beach in view of Larsson and Stewart teaches a NIC that enters its lowest power consumption mode. (Beach Col. 8 lines 35-42)

Regarding claim 18, Beach teaches a method for power saving in a mobile terminal used in a wireless local area network (WLAN) in an ad hoc network (Col. 2 lines 35-37) that comprises a wireless network interface card compatible with IEEE 802.11 power save procedures (Col. 1 lines 32-41 & line 65 through Col. 2 line 16) and an operating system compatible with a plurality of the power states. (Col. 2 lines 7-16, Col. 6 lines 54-59 and Col. 7 line 4-7). Beach further teaches communication with a second mobile terminal (serving as the access point – col. 5, lines 38-40), however differs from the claimed invention by not explicitly reciting a mobile terminal that requests for a transition from a less active state to a more active state, upon which the NIC enters a more active state.

In an analogous art, Larsson teaches a method and apparatus for power saving in a mobile terminal where the mobile terminal can request to enter or exit the power saving mode and then informs the access point. (Col. 3 lines 20-60 *i.e.* the access point would be the master in an ad hoc network) At the time the invention was made, it would have been obvious to one of ordinary skill in the art to implement the method of power saving in a mobile terminal in an ad hoc network of Beach after modifying it to incorporate the ability for a mobile terminal to enter and exit the power saving mode of Larsson by specifically enabling the mobile to request such transitions. One of ordinary skill in the art would have been motivated to do this since allowing the mobile terminal to request to enter or exit a power saving mode conserves battery power for when the user

needs the mobile terminal and lets the access point know to queue messages for the mobile terminal. (Col. 2 lines 33-64)

Beach in view of Larsson teaches a method and apparatus for power saving in a mobile terminal and Beach suggests the use of an 802.11 radio card (Col. 3 lines 8-11), however fails to explicitly recite the mobile terminal requests a NIC to communicate with the second mobile terminal.

In an analogous art, Stewart teaches a communication network (Figs. 1 & 6) that includes portable computing devices (Fig. 6 [110]) comprising a NIC (Col. 2 lines 20-23 & Col. 5 line 65 through Col. 6 line 1) that is used for communicating with a second mobile terminal in an ad hoc network (Col. 12 lines 6-10) over the IEEE 802.11 wireless network standard. (Col. 5 lines 8-11) At the time the invention was made, it would have been obvious to one of ordinary skill in the art to implement the method of power saving in mobile terminals of Beach in view of Larsson after modifying the mobile terminal to incorporate a NIC specifically for communicating in an ad hoc network using IEEE 802.11 as taught by, Stewart and thereby in response to communication requests by the mobile terminal intended for the 802.11 network, specifically having the NIC communicate with or request the second mobile terminal. One of ordinary skill in the art would have been motivated to do this since a NIC provides a convenient and readily available means to enable mobile devices to communicate with wireless local area networks.

Regarding claim 23, Beach in view of Larsson and Stewart teaches a NIC that enters its lowest power consumption mode. (Beach Col. 8 lines 35-42)

6. Claims 5, 8, 19-21, 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beach in view of Larsson and Chen et al. (US-5,502,724 hereinafter, Chen)

Regarding claim 5, Beach teaches a method for power saving in a mobile terminal used in a wireless local area network (WLAN) (Col. 1 line 65 through Col. 2 line 18) that comprises an 802.11 radio card (Col. 3 lines 8-11) compatible with IEEE 802.11 power save procedures (Col. 1 lines 32-41 & line 65 through Col. 2 line 16), an access point (Col. 2 line 17) and an operating system compatible with a plurality of power states. (Col. 6 line 54-59) Beach differs from the claimed invention by not explicitly reciting a mobile terminal that, due to inactivity, requests for a transition from an active state to a less active state, upon which the mobile terminal requests the AP to be disassociated from the AP and on acknowledgement, the mobile terminal enters a disassociated state.

In an analogous art, Larsson teaches a method and apparatus for power saving in a mobile terminal where the mobile terminal can request to enter or exit the power saving mode and then informs the access point. (Col. 3 lines 20-60) At the time the invention was made, it would have been obvious to one of ordinary skill in the art to implement the method of power saving in a mobile terminal of Beach after modifying it to incorporate the ability for a mobile terminal to enter and exit the power saving mode of Larsson by specifically enabling the mobile to request such transitions. One of ordinary skill in the art would have been motivated to do this since allowing the mobile terminal to request to enter or exit a power saving mode conserves battery power for

when the user needs the mobile terminal and lets the access point know to queue messages for the mobile terminal. (Col. 2 lines 33-64)

Beach in view of Larsson differs from the claimed invention by not explicitly reciting the mobile terminal requests the access point to be disassociated or de-authenticated from the access point and then the mobile terminal enters a disassociated or de-authenticated state.

In an analogous art, Chen teaches a method for disconnection in a mobile terminal where the mobile terminal can request to be disconnected from another mobile terminal in a network. (Col. 2 line 60 through Col. 3 line 6) At the time the invention was made, it would have been obvious to one of ordinary skill in the art to implement the method of power saving for a mobile terminal in an ad hoc network of Beach in view of Larsson after modifying it to incorporate the ability to request to be disconnected from the network of Chen. One of ordinary skill in the art would have been motivated to do this since allowing the mobile terminal to enter or exit the power saving mode conserves battery power of the mobile terminal and it is quite possible that a mobile terminal would leave the effective connection range of the communication network. (Chen Col. 2 lines 9-12)

Regarding claim 8, Beach teaches a method for power saving in a mobile terminal used in a wireless local area network (WLAN) in an ad hoc network (Col. 2 lines 35-37) that comprises an 802.11 radio card (Col. 3 lines 8-11) compatible with IEEE 802.11 power save procedures (Col. 1 lines 32-41 & line 65 through Col. 2 line 16) usable in an ad-hoc network configuration (Col. 7 lines 4-7) and an operating system compatible with a plurality of the power states. (Col. 2 lines 7-16, Col. 6 lines 54-59 and

Col. 7 line 4-7). Beach further teaches communication with a second mobile terminal (serving as the access point – col. 5, lines 38-40), however Beach differs from the claimed invention by not explicitly reciting a mobile terminal that, due to inactivity, requests for a transition from an active state to a less active state, upon which the mobile terminal requests the second mobile terminal in the ad hoc network to be disassociated or de-authenticated from the ad hoc network.

In an analogous art, Larsson teaches a method and apparatus for power saving in a mobile terminal where the mobile terminal can request to enter or exit the power saving mode and then informs the access point. (Col. 3 lines 20-60 *i.e.* the access point would be the master in an ad hoc network) At the time the invention was made, it would have been obvious to one of ordinary skill in the art to implement the method of power saving in a mobile terminal in an ad hoc network of Beach after modifying it to incorporate the ability for a mobile terminal to enter and exit the power saving mode of Larsson by specifically enabling the mobile to request such transitions. One of ordinary skill in the art would have been motivated to do this since allowing the mobile terminal to request to enter or exit a power saving mode conserves battery power for when the user needs the mobile terminal and lets the access point know to queue messages for the mobile terminal. (Col. 2 lines 33-64)

Beach in view of Larsson differs from the claimed invention by not explicitly reciting the mobile terminal requests the AP to be disassociated or de-authenticated from the AP and on acknowledgement from the AP, the mobile terminal enters a disassociated or de-authenticated state.

In an analogous art, Chen teaches a method for disconnection in a mobile terminal where the mobile terminal can request to be disconnected from another mobile terminal in an ad hoc network. (Col. 2 line 60 through Col. 3 line 6) At the time the invention was made, it would have been obvious to one of ordinary skill in the art to implement the method of power saving for a mobile terminal in an ad hoc network of Beach in view of Larsson after modifying it to incorporate the ability to request to be disconnected from the network of Chen. One of ordinary skill in the art would have been motivated to do this since allowing the mobile terminal to enter or exit the power saving mode that conserves battery power of the mobile device and it is quite possible that a mobile terminal would leave the effective connection range of the communication network. (Col. 2 lines 9-12)

Regarding claim 19, Beach in view of Larsson and Chen teaches a mobile terminal that is disassociated from the access point without using a disassociated signal. (Beach Col. 3 line 22-28)

Regarding claim 20, Beach in view of Larsson and Chen teaches a mobile terminal that is disassociated from the access point without using a disassociated signal. (Beach Col. 3 line 22-28)

Regarding claim 21, Beach in view of Larsson and Chen teaches a mobile terminal that associates with an access point on transition from a sleep mode to an awake mode. (Beach Col. 10 lines 28-35)



Regarding claim 24, Beach in view of Larsson and Chen teaches a NIC that enters its lowest power consumption mode. (Beach Col. 8 lines 35-42)

Regarding claim 25, Beach in view of Larsson and Chen teaches a NIC that enters its lowest power consumption mode. (Beach Col. 8 lines 35-42)

7. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beach in view of Larsson and Stewart as applied to claim 3 above, and further in view of van Bokhorst et al. (US-6,192,230 hereinafter, van Bokhorst).

Regarding claim 12, Beach in view of Larsson and Stewart teaches the limitations of claim 3 above, but differs from the claimed invention by not explicitly reciting a mobile terminal in an ad hoc network that associates with an ad hoc network on transition from a less active state to a more active state.

In an analogous art, van Bokhorst teaches a mobile terminal in an ad hoc network that associates with an ad hoc network on transition from a less active state to a more active state. (van Bokhorst Col. 6 lines 43-48) At the time the invention was made, it would have been obvious to one of ordinary skill in the art implement the method of power saving for a mobile terminal in an ad hoc network of Beach in view of Larsson and Stewart after modifying it to incorporate the ability of a mobile terminal to associated with an ad hoc network when transitioning to a more active state of van Bokhorst. One of ordinary skill in the art would have been motivated to do this since associating the mobile terminal in an ad hoc network when transitioning to an active state allows quicker synchronization with the network.

8. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beach in view of Larsson, Chen et al. (US-5,502,724 hereinafter, Chen) and further in view of van Bokhorst et al. (US-6,192,230 hereinafter, van Bokhorst).

Beach in view of Larsson, and Chen teaches the limitations of claim 8 above, but differs from the claimed invention by not explicitly reciting a mobile terminal in an ad hoc network that associates with an ad hoc network on transition from a less active state to a more active state.

In an analogous art, van Bokhorst teaches a mobile terminal in an ad hoc network that associates with an ad hoc network on transition from a less active state to a more active state. (van Bokhorst Col. 6 lines 43-48) At the time the invention was made, it would have been obvious to one of ordinary skill in the art implement the method of power saving for a mobile terminal in an ad hoc network of Beach in view of Larsson and Chen after modifying it to incorporate the ability of a mobile terminal to associated with an ad hoc network when transitioning to a more active state of van Bokhorst. One of ordinary skill in the art would have been motivated to do this since associating the mobile terminal in an ad hoc network when transitioning to an active state allows quicker synchronization with the network.

### ***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew C. Sams whose telephone number is (571)272-8099. The examiner can normally be reached on M-F 7:30-5.


Application/Control Number:  
10/004,786  
Art Unit: 2617

Page 18

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571)272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MCS  
12/14/2007

  
MARK R. POWELL  
DIRECTOR  
TECHNOLOGY CENTER 2600

  
LESTER G. KINCAID  
SUPERVISORY PRIMARY EXAMINER